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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/933,517
Filing Date: August 20, 2001
Appellant(s): MIZUTANI, MASARU

MAILED

FEB 14 2006

GROUP 3600

Gavin J. Milczarek-Desai
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 21 October 2005 appealing from the Office action mailed 19 May 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: new grounds of rejection.

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8 through 10, 16, 18, 22, 24, 28, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*.

Meilahn '024, as seen in Figures 1 through 12, shows a seawater swimming pool comprising:

with regard to claim 8,

a swimming pool structure (24) floating on a sea (26; col. 3, lines 30 through 32); and
means for collecting and supplying seawater (39) to the swimming pool structure;

wherein surface seawater and aquatic animals are substantially excluded from said swimming pool structure;

with regard to claim 9,

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further comprising means for mooring (25) the swimming pool structure at a fixed location;

with regard to claim 10,

wherein the means for mooring includes an anchor (29);

with regard to claim 16,

further comprising means for draining the water (47) from the swimming pool structure;

with regard to claim 18,

further comprising a facility (56) for enabling fishing from a side of the swimming pool structure; and

with regard to claim 44,

a swimming pool structure (24); and

means for collecting and supplying seawater (39) to the swimming pool structure.

Meilahn '024 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 8 and 44,

the means for collecting and supplying seawater being capable of collecting and supplying deep-sea water;

with regard to claim 22,

means for solar power generation;

with regard to claim 24,

means for wind power generation; and

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with regard to claim 28,

the means for collecting and supplying deep-sea water to the swimming pool structure including a check valve which only allows an upward flow of the deep-sea water.

Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan* discloses the establishment of deep-sea water pumping systems in Toyama Bay in 1989 and 1990 for the purposes of research in the cultivation of marine resources including aquaculture. Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water* discloses the establishment of deep seawater pumping stations in the Kochi Prefecture. Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* teaches the advantages of a deep seawater collection facility. The advantages of deep-sea water taught by the references include the ability to culture cold-water organisms and deep-ocean organisms in tropical areas, ease at which water temperature can be controlled by mixing surface water with deep-sea water, and disease control (there are few viruses and pathogenic bacteria in deep sea water).

With regard to claims 8 and 44, it would have been obvious to one of ordinary skill in the art of animal husbandry at the time of invention to modify the means for collecting supplying shown by Meilahn '024 such that it would comprise a deep-sea water pumping system as suggested by Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*. The motivation would have been to facilitate cultivation of cold-water organisms in the swimming pool structure.

With regard to claims 22 and 24, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include means for generating solar or wind power since the Examiner takes Official Notice of the use of water for powering renewable energy systems.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that the means for collecting and supplying deep-sea water would include a check valve on the intake pipe since the Examiner takes Official Notice of the use of check valves for preventing the reversal of flow in a specific direction.

3. Claims 11 through 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on*

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Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports as applied to claims 8 and 9 above, and further in view of Mougin (U.S. Patent No. 4,166,363).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 11 and 12,

a propulsion device; and

with regard to claim 13,

the propulsion device including a propeller.

Mougin '363, as seen in Figures 1 through 3, shows a floating swimming pool structure provided with a propeller (3) for driving the same.

With regard to claims 11 through 13, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include a

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propulsion unit as taught by Mouglin '363. The motivation would have been to facilitate relocation of the swimming pool structure within a body of water.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Sibinski et al. (U.S. Patent No. 2,641,221).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 14,

a plurality of extensions protruding from the swimming pool structure adapted to protect the swimming pool structure from attacks by sea creatures.

Sibinski et al. '221 expressly teaches the use of a plurality of extensions (16, 17 or 18) protruding from a body adapted to protect the body from attacks by fish (col. 2, lines 38 through 45).

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With regard to claim 14, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device disclosed by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include a plurality of extensions as taught by Sibinski et al. '221. The motivation would have been to impede the movement of fish approaching the swimming pool structure.

5. Claims 15, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; and Mougin (U.S. Patent No. 4,166,363) as applied to claim 12 above, and further in view of Sibinski et al. (U.S. Patent No. 2,641,221).

Meilahn '024 further discloses:

with regard to claim 17,

means for draining the deep sea water (47) from the swimming pool structure; and

with regard to claim 19,

a facility (56) for enabling fishing from a side of the swimming pool structure.

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Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* and Mougin '363 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 15,

a plurality of extensions protruding from the swimming pool structure.

Sibinski et al. '221 expressly teaches the use of a plurality of extensions (16, 17 or 18) protruding from a body adapted to protect the body from attacks by fish (col. 2, lines 38 through 45).

With regard to claim 15, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device disclosed by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; and Mougin '363 such that it would include a plurality of extensions as taught by Sibinski et al. '221. The motivation would have been to impede the movement of fish approaching the swimming pool structure.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and

Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* further teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 20,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating swimming pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the swimming pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 20, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the swimming pool

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structure as taught by Puncochar '819. The motivation would have been to include means for dissolving oxygen as desired.

7. Claims 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin (U.S. Patent No. 4,166,363); and Sibinski et al. (U.S. Patent No. 2,641,221) as applied to claim 19 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; and Sibinski et al. '221 teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention the exception(s) of:

with regard to claim 21,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool;

with regard to claim 23,

means for solar power generation; and

with regard to claim 25,

means for wind power generation.

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Puncochar '819, as seen in Figs. 1 through 3, discloses a floating swimming pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the swimming pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 21, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363, and Sibinski et al. '221 such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the swimming pool structure as taught by Puncochar '819. The motivation would have been to include means in the pool structure for dissolving oxygen as desired.

With regard to claims 23 and 25, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024; Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; Sibinski et al. '221; and Puncochar '819 such that it would

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include means for generating solar/wind power since the Examiner takes Official Notice of the use of water for powering renewable energy systems.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 26,

a seawater desalination plant.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 26, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto

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High Degree of Application for Deep Sea Water in Fishing Ports such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the pool structure for consumption.

9. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin (U.S. Patent No. 4,166,363); Sibinski et al. (U.S. Patent No. 2,641,221); and Puncochar (U.S. Patent No. 3,571,819) as applied to claim 25 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 further discloses:

with regard to claim 29,

the means for collecting and supplying seawater including an intake pipe (41).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; Sibinski et al. '221; and Puncochar '819 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 27,

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a seawater desalination plant; and
with regard to claim 29,

the means for collecting and supplying deep-sea water to the swimming pool structure including a check valve which only allows an upward flow of the deep-sea water.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 27, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024; Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; Sibinski et al. '221; and Puncochar '819 such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the pool structure for consumption.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024, Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; O'Hare '330; Puncochar '819; and Atwell '257 such that the means for collecting and supplying deep-sea

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water would include a check valve on the intake pipe since the Examiner takes Official Notice of the use of check valves for preventing the reversal of flow in a specific direction.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8 through 29 and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

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claimed invention. Specifically, the Specification as originally filed fails to provide support for the newly added limitation of surface seawater and aquatic animals being substantially excluded from the swimming pool structure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8 through 10, 16, 18, 22, 24, 28, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*.

Meilahn '024, as seen in Figures 1 through 12, shows a seawater swimming pool comprising:

with regard to claim 8,

a swimming pool structure (24) floating on a sea (26; col. 3, lines 30 through 32); and means for collecting and supplying seawater (39) to the swimming pool structure;

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wherein surface seawater and aquatic animals are substantially excluded from said swimming pool structure;

with regard to claim 9,

further comprising means for mooring (25) the swimming pool structure at a fixed location;

with regard to claim 10,

wherein the means for mooring includes an anchor (29);

with regard to claim 16,

further comprising means for draining the water (47) from the swimming pool structure;

with regard to claim 18,

further comprising a facility (56) for enabling fishing from a side of the swimming pool structure; and

with regard to claim 44,

a swimming pool structure (24); and

means for collecting and supplying seawater (39) to the swimming pool structure.

Meilahn '024 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 8 and 44,

the means for collecting and supplying seawater being capable of collecting and supplying deep-sea water;

with regard to claim 22,

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means for solar power generation;

with regard to claim 24,

means for wind power generation; and

with regard to claim 28,

the means for collecting and supplying deep-sea water to the swimming pool structure including a check valve which only allows an upward flow of the deep-sea water.

Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan* discloses the establishment of deep-sea water pumping systems in Toyama Bay in 1989 and 1990 for the purposes of research in the cultivation of marine resources including aquaculture. Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water* discloses the establishment of deep seawater pumping stations in the Kochi Prefecture. Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* teaches the advantages of a deep seawater collection facility. The advantages of deep-sea water taught by the references include the ability to culture cold-water organisms and deep-ocean organisms in tropical areas, ease at which water temperature can be controlled by mixing surface water with deep-sea water, and disease control (there are few viruses and pathogenic bacteria in deep sea water).

With regard to claims 8 and 44, it would have been obvious to one of ordinary skill in the art of animal husbandry at the time of invention to modify the means for collecting supplying shown by Meilahn '024 such that it would comprise a deep-sea water pumping system as suggested by Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay*,

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Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports. The motivation would have been to facilitate cultivation of cold-water organisms in the swimming pool structure.

With regard to claims 22 and 24, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include means for generating solar or wind power since the Examiner takes Official Notice of the use of water for powering renewable energy systems.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports* such that the means for collecting and supplying deep-sea water would include a check valve on the intake pipe since the Examiner takes Official Notice of the use of check valves for preventing the reversal of flow in a specific direction.

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11. Claims 11 through 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claims 8 and 9 above, and further in view of Mougin (U.S. Patent No. 4,166,363).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 11 and 12,

a propulsion device; and

with regard to claim 13,

the propulsion device including a propeller.

Mougin '363, as seen in Figures 1 through 3, shows a floating swimming pool structure provided with a propeller (3) for driving the same.

With regard to claims 11 through 13, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn

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'024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include a propulsion unit as taught by Mouglin '363. The motivation would have been to facilitate relocation of the swimming pool structure within a body of water.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Sibinski et al. (U.S. Patent No. 2,641,221).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 14,

a plurality of extensions protruding from the swimming pool structure adapted to protect the swimming pool structure from attacks by sea creatures.

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Sibinski et al. '221 expressly teaches the use of a plurality of extensions (16, 17 or 18) protruding from a body adapted to protect the body from attacks by fish (col. 2, lines 38 through 45).

With regard to claim 14, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device disclosed by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include a plurality of extensions as taught by Sibinski et al. '221. The motivation would have been to impede the movement of fish approaching the swimming pool structure.

13. Claims 15, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; and Mouglin (U.S. Patent No. 4,166,363) as applied to claim 12 above, and further in view of Sibinski et al. (U.S. Patent No. 2,641,221).

Meilahn '024 further discloses:

with regard to claim 17,

means for draining the deep sea water (47) from the swimming pool structure; and

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with regard to claim 19,

a facility (56) for enabling fishing from a side of the swimming pool structure.

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* and Mougin '363 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 15,

a plurality of extensions protruding from the swimming pool structure.

Sibinski et al. '221 expressly teaches the use of a plurality of extensions (16, 17 or 18) protruding from a body adapted to protect the body from attacks by fish (col. 2, lines 38 through 45).

With regard to claim 15, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device disclosed by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; and Mougin '363 such that it would include a plurality of extensions as taught by Sibinski et al. '221. The motivation would have been to impede the movement of fish approaching the swimming pool structure.

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14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* further teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 20,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating swimming pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the swimming pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 20, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*;

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Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the swimming pool structure as taught by Puncochar '819. The motivation would have been to include means for dissolving oxygen as desired.

15. Claims 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin (U.S. Patent No. 4,166,363); and Sibinski et al. (U.S. Patent No. 2,641,221) as applied to claim 19 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; and Sibinski et al. '221 teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention the exception(s) of:

with regard to claim 21,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool;

with regard to claim 23,

means for solar power generation; and

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with regard to claim 25,

means for wind power generation.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating swimming pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the swimming pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 21, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363, and Sibinski et al. '221 such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the swimming pool structure as taught by Puncochar '819. The motivation would have been to include means in the pool structure for dissolving oxygen as desired.

With regard to claims 23 and 25, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024; Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin*

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Inflammation by Deep Sea Water; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; Sibinski et al. '221; and Puncochar '819 such that it would include means for generating solar/wind power since the Examiner takes Official Notice of the use of water for powering renewable energy systems.

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* as applied to claim 8 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 26,

a seawater desalination plant.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 26, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination

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of Meilahn '024 and Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports* such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the pool structure for consumption.

17. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin (U.S. Patent No. 4,166,363); Sibinski et al. (U.S. Patent No. 2,641,221); and Puncoschar (U.S. Patent No. 3,571,819) as applied to claim 25 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 further discloses:

with regard to claim 29,

the means for collecting and supplying seawater including an intake pipe (41).

Meilahn '024 in view of Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363;

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Sibinski et al. '221; and Puncochar '819 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 27,

a seawater desalination plant; and

with regard to claim 29,

the means for collecting and supplying deep-sea water to the swimming pool structure including a check valve which only allows an upward flow of the deep-sea water.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 27, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024; Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan*; Nomura *Treatment of Atopy Skin Inflammation by Deep Sea Water*; and Miyamoto *High Degree of Application for Deep Sea Water in Fishing Ports*; Mougin '363; Sibinski et al. '221; and Puncochar '819 such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the pool structure for consumption.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024, Iseki et al. *Effect of Artificial Upwelling on Primary Production in Toyama Bay*,

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Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamoto High Degree of Application for Deep Sea Water in Fishing Ports; Mouglin '363; O'Hare '330; Puncoschar '819; and Atwell '257 such that the means for collecting and supplying deep-sea water would include a check valve on the intake pipe since the Examiner takes Official Notice of the use of check valves for preventing the reversal of flow in a specific direction.

(10) Response to Argument

In response to Appellant's assertion that the Specification as originally filed provides support for the language "wherein surface-sea water and aquatic animals are substantially excluded from said swimming pool structure" as recited in independent claims 8 and 44, the Examiner contends the following:

Appellant's disclosure directed to the direct intake of deep seawater and the regeneration of the deep seawater in a swimming pool structure merely teaches the inclusion of deep seawater. The Examiner maintains that such disclosure does not in any way support the substantial exclusion of surface seawater from the swimming pool structure. While the Specification expressly teaches the advantageous use of deep seawater in a pool structure, it is markedly silent regarding the exclusion of surface seawater. Furthermore, the drawings do not show means for preventing the ingress of surface seawater into the pool structure in every reasonable manner. For example, entry of surface seawater through the open top and relatively low sides of the pool structure is substantially unimpeded.

Appellant's disclosure directed to the mineral content of deep seawater and the prevention of shark attack does not possess the breadth in scope necessary to support the claimed

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limitation of substantially excluding aquatic life from the pool structure. Specifically, the Examiner contends that aquatic life exists in deep seawater in an abundance of forms and Appellant fails to address the manner of excluding even the least of these forms from the swimming pool structure. For example, Appellant is silent with regard to any sort of filtration/separation device included on the intake pipe.

With regard to the newly added rejection, the Examiner has substantially reinstated the art rejection of the Office action mailed 26 November 2004 because the phrase “wherein surface-sea water and aquatic animals are substantially excluded from said swimming pool structure” does not structurally distinguish the claimed invention from the pool structure shown by the prior art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner’s answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

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(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. B. Will', with a stylized flourish at the end.

Thomas B. Will
Supervisory Patent Examiner
Group 3600

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A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Examiner:

tlm 

Conferees:

tbw 

dj 


APPROVED BY
DONALD T. HAJEC
DIRECTOR, TECHNOLOGY CENTER 3600